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ABSTRACT

The purpose of this study was to investigate the relationships among health status, personal definition of health, and health behavior choice in the elderly. Self-assessed health status was measured using a modified Cantril Ladder, personal definition of health was measured using the Laffrey Health Conception Scale (LHCS), and health behavior choice was measured using the Health Behavior Choice Scale (HBCS). A convenient sample of 30 subjects was drawn from an elderly population at a senior citizen center in central Florida. Questionnaire packets containing the instruments were distributed and collected at the center. Correlation coefficients were used to determine the relationships between the pairs of variables, with separate correlation coefficients for each subscale of the LHCS. No significant relationship was found between either health conception and health behavior choice or health status and health behavior choice. Clinical health conception was significantly correlated with health status. There was no significant relationship between health status and the remaining subscales of the LHCS. Weakly positive correlations were noted between: (1) health conception and health behavior choice; (2) health status and health behavior choice; and (3) health status and the remaining subscales of the LHCS. Replication of the study using a larger sample is indicated. (Author)

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HEALTH STATUS, PERSONAL DEFINITION OF HEALTH, AND HEALTH BEHAVIOR CHOICE IN THE ELDERLY

by

Norma J. Wood

A thesis submitted in partial fulfillment of the requirements
for the degree of Master Of Science
in the College of Nursing in
the University of South Florida

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May, 1987

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An Abstract

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The purpose of this study was to investigate the relationships among health status, personal definition of health, and health behavior choice in the elderly. Self-assessed health status was measured using a modified Cantril Ladder, personal definition of health was measured using the Laffrey Health Conception Scale (LHCS), and health behavior choice was measured using the Health Behavior Choice Scale (HBCS).

A convenient sample of 30 subjects was drawn from an elderly population at a senior citizen's center in central Florida. Questionnaire packets containing the instruments were distributed and collected at the center. Correlation coefficients were used to determine the relationships between the pairs of variables, with separate correlation coefficients for each subscale of the LHCS.

No significant relationship was noted between either health conception and health behavior choice or health status and health behavior choice. Clinical health conception was significantly correlated with health status. There was no significant relationship between health status and the remaining subscales of the LHCS. The hypotheses of the study were therefore not supported.

Weakly positive correlations were noted between (a) health conception and health behavior choice, (b) health status and health behavior choice, and (c) health status and the remaining subscales of the LHCS. Replication of the study using a larger sample is indicated.

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Major Professor: Alice G. Dowd, R.N., Ed.D.

Professor of Nursing

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Date of Approval

INTRODUCTION

The concept of health has been integral to the practice of nursing since Florence Nightingale's time. More recently, the concepts of health, nursing, environment, and person have been identified as essential concepts for nursing. In spite of this expressed emphasis on health, little agreement exists in the nursing literature regarding the definition of health. A large number of different and sometimes conflicting definitions have been proposed, but few studies have attempted to investigate the way in which individuals, particularly health-care consumers, define health. It is essential that nurses understand how health care consumers define health in order to predict which health behaviors will be meaningful and acceptable.

Baumann (1961, p. 39) noted that "persons may fail to respond to measures designed to improve their health because they fail to perceive the measures as related to their conception of health." King (1981) argues that the individual's health is the goal of nursing, and that mutual goal-setting between the individual and the nurse enhances achievement this goal. Nurses must determine the meaning of health held by the individual and relate that meaning to their own personal definition of health before they can effectively assist the individual in making health behavior choices.

The need to define health is particularly acute in the elderly population. Increases in both life expectancy and numbers of elderly has generated a great deal of interest in health promotion, with the

suggestion that regular, periodic care of the well elderly is as important as it is for pediatric age groups. A major problem with this approach to health care is that the elderly tend not to respond to health promotion measures and to seek care only when ill.

Laffrey (1983, 1985) postulated that the increased incidence of chronic disease in aging causes older persons to become more oriented toward illness prevention. Health behavior was studied in association with the way in which the individual defined health. Laffrey found that, while complex conceptions of health are associated with high level behaviors such as health promotion, there is a tendency with age to value lower level behaviors such as illness prevention.

Although Laffrey's research did not demonstrate a significant relationship between age and health conception, health conception scores were noted to decline slightly with age. This finding suggests that older individuals with substantially decreased health status may tend to develop less complex conceptions of health in addition to practicing less promotive health behaviors.

This study will attempt to confirm the relationship between health conception and health behavior choices that was demonstrated by Laffrey, and to investigate whether the older individual's health status affects the way in which health is defined and the choices made regarding health.

Purpose of the Study

The purpose of this study is to investigate the relationships among health status, personal definition of health, and health behavior choice in the elderly. It is believed that personal definition of health and health behavior choice are positively associated and that both are affected by health status. If this is true, nurses will need

to consider personal definition of health and health status in selecting and offering health behaviors which are likely to be valued and followed by the individual.

Definition of Terms

For this study, the following definitions will apply.

1. Health status. The rating which is assigned by the individual to his or her own health.

2. Personal definition of health. The meaning of health held by the individual. Personal definition of health and health conception are synonymous terms. Four levels of health conception are:

(a) Clinical. The absence of disease, illness, or symptoms. Health is medically defined and illness or symptom-focused. One is considered healthy if one is not ill.

(b) Role performance/functional. Fulfillment of socially defined roles, or the ability to perform/function as expected according to the roles held by the individual.

(c) Adaptive. Flexible adjustment to changing circumstances, ability to efficiently adapt to the environment and its stressors and to maintain stability in one's life.

(d) Eudaimonistic. Exuberant well-being, transcendence of one's ordinary life situation to higher levels of well-being and humanness, and ability to achieve highest potentials and self-realization.

3. Health behavior. An action which is undertaken to improve one's health. Three categories of health behavior are:

(a) Illness prevention. Any behavior believed to reduce the risk of illness or disease.

(b) Health maintenance. Any behavior believed to protect the current level of health.

(c) Health promotion. Any behavior believed to assist in achieving a higher level of health.

4. Health behavior choice. A decision to undertake a particular health behavior.

5. Elderly. Fifty-five years of age or older. As a result of the social security laws passed in 1935, 65 is generally considered to be the beginning of old age. This study will use the criterion established by Neugarten (1974), who proposed that (be regarded as the onset of old age.

REVIEW OF THE LITERATURE

The literature that has been explored as background data for this study is treated in three sections: (a) health conception, (b) self-assessed health status, and (c) health behavior. Theory and research findings relevant to each section are reviewed and followed by a brief summary and the conceptual framework.

Health Conception

The word health has its origin in the old English word hoelth, which means safe or sound and whole of body. In spite of this early emphasis on the positive and holistic nature of the concept, health in modern times has been largely equated with the absence of physical illness. Health indexes traditionally consist of estimates of morbidity and mortality rates within a population, while health care literature has concerned itself more with diseases than with the behaviors associated with optimal health.

During the middle of this century, health was recognized as a positive force involving more than just the absence of physical illness. In accordance with this perspective, the World Health Organization defined health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (1958, p. 29). Current literature has attempted to more fully define what is meant by health or well-being, leading three authors to develop classifications for the many differing concepts which have resulted.

Wylie (1970) divided health conception into two types: (a) the asymptotic or open-ended concept, in which perfect health is an unattainable state in which the individual's full potential is achieved; and (b) the elastic concept, in which health is the ability to resist the threat of disease and interact positively with the environment. According to the open-ended concept, health is "an ideal toward which people are oriented rather than a state they expect to obtain" (Twaddle, 1979, p. 1). The elastic concept focuses on the "struggle between a basically hostile environment and a series of defenses we are endowed with or learn. The goal of the struggle is the homeostatic balance of forces" (Beeson, 1967, p. 1904).

Pender (1982) identified three categories of health conception: definitions focusing on actualization, stability, and both actualization and stability. Definitions focusing on actualization are similar in nature to the open-ended concept in that optimal health is a state in which the individual is able to achieve maximal potential and self-realization. Definitions focusing on stability are incorporated into the elastic concept in which health is related to the individual's ability to adapt to the environment. Pender proposed the following definition of health focusing on both actualization and stability: "Health is the actualization of inherent and acquired human potential through satisfying relationships with others, goal directed behavior, and competent personal care while adjustments are made as needed to maintain stability and structural integrity" (p. 37).

The eudaimonistic orientation is the highest level of conceptualization and incorporates both the open-ended concept and definitions focusing on actualization. Self-actualization was first defined by Maslow (1970, p. 150) to indicate the full use and

exploitation of talents, capabilities, and potentialities. Eudaimonistic definitions view optimal health as an ideal state of self-actualization and exuberant well-being. Hoyman described this state of ideal health as "optimal personal fitness for full, fruitful, creative living" (1962, p. 253).

The adaptive orientation is a lower level of conceptualization and includes those definitions which focus on stability. Health is determined by the individual's ability to successfully interact with the environment and adjust to change, while health care is concerned with determining which behaviors are adaptive for the individual and which are ineffective (Roy, 1981). According to this orientation, "health is a purposeful, adaptive response, physically, mentally, emotionally, and socially to internal and external stimuli in order to maintain stability and comfort" (Murray & Zentner, 1975, p. 7).

The functional/role performance orientation is the next level of health conception presented by Smith (1979). This concept was described by Parsons, who defined health as "the state of optimum capacity of an individual for the effective performance of the roles and tasks for which he has been socialized" (1979, p. 132). The advantage of this orientation is that measurement criteria can be easily determined which define health in terms of observable activities. In addition, research indicates that function is the single most important means by which elderly persons define health (Baumann, 1961; Gulitz, 1978).

The clinical orientation is the lowest level of conceptualization and is represented in the medical model of health care. According to this model, health is the absence of disease and disease symptoms, and health care is concerned with the treatment of illness rather than with

those behaviors associated with optimal health. Bauman (1961) found that the absence of symptoms of disease was the most common means by which medical students define health. When asked to describe what is meant by good health, 74 per cent of medical students mentioned disease or disease symptoms. Two other general orientations to health were also identified: (a) feeling-state, an overall feeling of well-being similar to the eudaimonstic orientation (Smith, 1981); and (b) performance, what the healthy individual is able to do.

Baumann also investigated health conception in a group of health care consumers, and found that, in the majority of cases, two or three orientations were held by the individual. Four variables affected the individual's health conception: age, education, diagnosis, and religious affiliation. Symptom orientation decreased with age but increased with education. The increase in symptom orientation with education was accompanied by a decrease in feeling-state orientation. Jews and Protestants were more performance oriented than Catholics, a finding which Baumann attributed to cultural differences. Persons with diabetes mellitus were less performance oriented than persons in other diagnostic categories, a difference believed to be related to the degree of actual disability encountered by those who had diabetes. No association was noted between income and health conception (1961).

Gulitz (1978) investigated personal definition of health in the elderly using the three orientations identified by Baumann. A strong preference for the performance orientation was noted, followed by feeling-state, with the clinical orientation being the least representative of the person's own definition of good health.

Laffrey (1983, 1985) measured health conception based on the four categories described by Smith: eudaimonistic, adaptive, functional/role

performance, and clinical. Subjects were presented with 16 statements about health, four for each of Smith's categories, and asked to select the four items most consistent with their own concept of health (Laffrey, 1983, 1985). Responses were scored 1 for each clinical item, 2 for each role performance/functional item, 3 for each adaptive item, and 4 for each eudaimonistic item. Increased income was significantly correlated with an increase in the total score on the HCM, but no significant association was found between the level of health conception and either age or education.

Self-assessed Health Status

Research indicates that self-assessed health status is an effective means of assessing overall health in the elderly. A large number of studies have demonstrated a positive association between self-ratings of health and such objective measures as physician's ratings, chronic illnesses, number of days in bed, degree of disability, and symptoms of disease. Self-ratings tend to be a better indicator of future health status than are physicians' ratings (Maddox & Douglas, 1973), possibly because the individual is aware of a change in health status which is not yet apparent to the physician. Where disagreement exists between self-ratings and objective measures, the differences may be attributed to factors such as age, socioeconomic status, and sex.

Increased age is associated with an increase in optimistic ratings of one's health. The proportion of people who feel their health is much better than others of the same age is almost twice as great in individuals over the age of 60 (Cockerham, Sharp & Wilcox, 1983). There is a tendency for the old-old, age 75 and above, to rate their health more favorably than the young-old, age 60 to 74 (Ferraro, 1980; Maddox, 1964).

Persons of lower income and education tend to report poor health as compared to higher socioeconomic groups (Cockerham, et al., 1983; Markides & Martin, 1979). These findings are consistent with research that indicates poorer health and fewer resources with which to deal with health problems among lower socioeconomic groups.

Conflicting findings have been noted in studies which investigated the relationship between sex and self-assessed health status. When subjects were asked to rate their health as excellent, good, fair, or poor, Maddox (1964) noted that males tended to rate their health more highly, while Ferraro (1980) reported higher ratings by females. Stoller (1984) also noted higher ratings by females using the modified Cantril Ladder first proposed by Palmore and Luikhart (1972).

Participants were asked to mark their own state of health on a ladder-like scale numbered from zero to nine. This method enables older individuals to make finer discriminations in health status than is possible using a four-point scale. It also provides a continuous, equal-interval measure and is self-anchoring in that it is relative to the individual's own concept of minimal and optimal health. Engle (1984) noted that participants tend not to rate lack of health at zero and recommended that future research use a ladder calibrated from one to ten rather than from zero to nine.

Health Behavior

Kasl and Cobb (1966) identified the following three types of behavior related to health and illness: health, sick role, and illness behavior. Health behavior is any activity directed toward prevention or detection of disease in the well or asymptomatic state. Illness and sick role behavior include any activity directed toward the definition and restoration of health in the ill or sick individual. According to

this classification system, all health behavior is illness-oriented.

More recently, health behavior has been defined to include a wider range of behaviors; namely, illness prevention, health maintenance, and health promotion. While illness prevention refers mainly to what Kasl and Cobb termed health behavior, health maintenance and promotion refer to activities which do not focus on illness or on defining health in terms of illness.

While much of the literature on health behavior has dealt with utilization of health care services, research indicates that the majority of health behaviors do not involve contact with the health care system. When asked what were the three most important things they did to protect their health, only 18.8 per cent of the respondents in one survey mentioned contact with the health care system (Harris & Guten, 1979). The most frequently named behaviors were: nutrition (71.3 per cent), rest (46.1 per cent), and physical activity (35.8 per cent).

Health practices which have been found to be highly conducive to good health are: obtaining adequate sleep, eating regular meals, maintaining near average weight, engaging in physical activity, and avoiding smoking and excessive drinking. Belloc and Breslow (1972) found that the health status of persons over the age of 75 who follow all four of these practicies is equivalent to the health status of persons age 35 to 44 who follow fewer than three.

Various models have evolved which attempt to explain why individuals choose to engage in certain health behaviors. In a review of several of these models, Cummings, Becker, and Maile (1980) identified the following clusters of factors which influence health behaviors: accessibility to health care, evaluation of health care,

perception of symptoms and threat of disease, social network characteristics, knowledge about the disease, and demographic characteristics.

One of the most widely used models is the Health Belief Model developed by Rosenstock (1966). According to this model, preventive health behavior is determined by the individual's perception of his or her susceptibility to the disease, severity of the disease, benefits of preventive actior ' and barriers to preventive action. Modifying factors that affect the likelihood that the individual will take preventive action are age, socioeconomic status, and information received from other individuals or the media.

In a review of studies based on the Health Belief Model, Cox (1985) found little connection between the factors identified in the model and health outcomes. Cox postulated that health behavior choices are determined by the degree of intrinsic and extrinsic motivation, or locus of control. However, subsequent research has failed to demonstrate a relationship between locus of control and health behavior.

Laffrey (1983, 1985) investigated health behavior choice using Maslow's framework. According to Maslow (1966), behavior is motivated either by fear, the need for homeostasis, or growth. Laffrey stated that illness prevention is fear-motivated, health maintenance protects the need for homeostasis, and health promotion satisfies the need for growth. Maslow further postulated that individuals develop according to certain needs: physiological, safety, belongingness, love, esteem, and self-actualization..

Maslow's framework is consistent with Rogers' concepts of unitary man, in which human behavior is viewed as a manifestation of the whole

person, and the unidirectionality of human development. According to Rogers (1970, p. 99), "the life process is characterized by probabilistic goal-directedness. Though the specific goal may not be known, increasing complexity of pattern and organization is a constant attendant of the developmental process."

The Nurse Theorist Group for the third and fourth national conferences on nursing diagnosis (Roy, 1980) utilized Rogers' concept of unitary man to study health behavior. Choosing and valuing were identified as two of the characteristics of human beings that determine action or behavior. Choosing involves the selection of health practices or behaviors. Valuing includes philosophical beliefs about health that are reflected in the individual's health goals and priorities and that determine which health behaviors will be selected.

Using Smith's framework (1981), which divides health conception into a hierarchy with eudaimonistic or self-actualizing definitions on the highest level, Laffrey (1983, 1985) postulated that valuing, as indicated by health conception, and choosing, as indicated by health behavior choice, would increase in level as self-actualization increased.

In studying health behavior choice, Laffrey developed the following categories based on the health behaviors identified by Harris and Guten (1979): sleep/rest, relaxation, physical exercise, nutrition, and dental care. Participants were presented with 15 items, each composed of a behavior statement and a two-alternative, forced-choice response designed to differentiate between three types of behavior: illness prevention, health maintenance, and health promotion. Participants were asked to mark the response which best described their reason for selecting that behavior. Responses were scored 1 for each preventive,

3 for each maintenance, and 7 for each promotive response.

Laffrey examined the effects of health conception and self-actualization on health behavior choice. No relationship was noted between self-actualization, as measured by the Personal Orientation Inventory (POI), and either health conception or behavior choice. Increasing age was not associated with increased self-actualization, as postulated by Maslow, but was associated with a decreased complexity of choosing, as indicated by a tendency toward illness prevention. The lack of significant relationships between the POI scores and the other variables raises questions concerning the validity of using this instrument again for this type of research.

Positive findings from the study were: (a) health conception is positively correlated with health behavior choice, (b) health conception is positively correlated with income, and (c) health behavior choice is negatively correlated with age. Regarding this last finding, Laffrey postulated that older individuals with chronic diseases tend to become more oriented toward lower levels of behavior such as illness prevention, while continuing to hold a complex definition of health.

Summary

Research indicates that a relationship exists between health conception and health behavior choice, and that health status may be a variable affecting this relationship (Laffrey, 1983,1985). Levels of health conception which have been identified in the literature (Smith 1981) are: eudaimonistic, adaptive, functional/role performance, and clinical. The eudaimonistic orientation is the highest level of health conception, while the clinical orientation is the lowest. Three types of health behaviors which are widely recognized are health promotion,

health maintenance, and illness prevention. A higher level of health conception is associated with a tendency toward health promotion, while a lower level of health conception is associated with a tendency toward illness prevention (Laffrey, 1983, 1985). Decreased health status is also postulated to result in a tendency toward illness prevention.

Conceptual Framework

The conceptual framework of this study is based on Laffrey's investigation of concepts presented by Maslow, Rogers, and the Nurse Theorist Group for the third and fourth national conferences on nursing diagnosis.

Maslow (1966) describes three basic reasons why individuals choose certain behaviors: fear, the need for homeostasis, and growth. According to Maslow, human beings move toward self-actualization in their development throughout life. From this perspective, Laffrey (1983, 1985) conceptualized that health behaviors may be categorized as preventive or fear motivated, maintenance or homeostatic, and promotive or growth motivated. As individuals progress toward self-actualization, health behavior choices move away from illness prevention and toward health promotion.

Health conception has also been conceptualized by Smith (1981) into four orientations: clinical, functional/role performance, adaptive, and eudaimonistic. While clinical and functional/role performance definitions focus on the threat of disease or disability, adaptive and eudaimonistic definitions reflect the need for homeostasis and growth.

Maslow's perspective (1966) is consistent with Rogers' view (1970) of human development as a process of increasing complexity and diversity and of human behavior as a manifestation of the whole person or unitary man. The Nurse Theorist Group for the third and fourth

national conferences on nursing diagnosis identified valuing and choosing as two characteristics of unitary man that determine behavior (Roy, 1980). In accordance with Maslow and Rogers, Laffrey postulated that valuing, indicated by health conception, and choosing, indicated by health behavior choice, would increase in complexity with increased development of the individual (1983, 1985).

The results of Laffrey's research only partially support this framework. No relationship was noted between development as measured by the Personal Orientation Inventory and either health conception or health behavior choice. A positive correlation was noted between level of health conception and level of health behavior choice. Increasing age was not associated with increased self-actualization, as had been expected, but was associated with a decreased complexity of choosing (Laffrey, 1983, 1985).

Based on the above framework, this study will further enhance understanding of the association between health status, health conception, and health behavior choice. It is postulated that decreased health status, because it involves a threat to the individual's safety and security and interferes with basic physiological needs, results in lower levels of behavior and health conception.

METHOD

The methodology for the proposed descriptive correlational study is presented in the following six sections: (a) permission to conduct the study, (b) sample, (c) instruments, (d) procedure for data collection, (e) hypotheses, and (f) analysis of data.

Permission to Conduct the Study

Permission to conduct the study was obtained as follows:

1. Permission to use the Laffrey Health Conception Scale (LHCS) and the Health Behavior Choice Scale (HBCS) was obtained from Laffrey (see Appendix 1).

2. Approval to conduct the study was obtained from the Institutional Review Board of the Medical Center according to established guidelines covering the use of human subjects in research (see Appendix 2).

3. Permission to collect the data at a senior citizens' center in central Florida was obtained from the Executive Director of the center (see Appendix 3).

4. Volunteers were solicited by the Executive Director. Informed consent was obtained from each participant (see Appendix 4).

Sample

A convenient sample of 30 volunteers was drawn from a population of primarily elderly persons who participated in activities at a private, non-profit senior citizens' center in central Florida between December 17, 1986, and January 22, 1987. The center, established in 1981,

provides educational and recreational activities and attracts middle-class elderly from the surrounding neighborhood. Criteria for sample selection were:

1. Attendance at the center.

2. Ability to read English and reply in writing to the questionnaires.

3. Age 55 or over.

While 65 years of age is widely considered to be the onset of old age, younger individuals who utilize services for senior citizens may consider themselves elderly. This study uses the criterion established by Neugarten (1974) in defining 55 as the onset of old age.

Instruments

Three instruments were used: Demographic Data and Health Status (see Appendix 5), the LHCS, (see Appendix 6) and the HBCS (see Appendix 7). Demographic characteristics which were investigated for the sample include age, sex, race, education, occupation, income, and marital status. Health status was assessed using a modified Cantril Ladder (see Appendix 5). Participants were asked to rate their health on a ladder-like scale ranging from 1 (worst possible health) to 10 (best possible health).

The LHCS (see Appendix 6) measured personal definition of health. This instrument consists of 28 statements, seven for each of Smith's (1981) orientations to health: eudaimonistic, adaptive, functional/role performance, and clinical. Statements used in the scale were drawn from the responses of 75 adults who were asked: "What do you mean when you say that you are in very good health?" Participants were asked to rate each statement according to a Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree).

During development of the instrument, content validity of the LHCS was determined by submitting the items to a panel of nurse-experts who independently placed each item into one of the four orientations identified by Smith (1981). Construct validity was determined by factor analysis. Respective findings were: (a) 25 of the statements achieved 100 per cent interrater agreement; (b) three of the statements, which had achieved 100 per cent agreement during previous testing, obtained 65 to 75 per cent agreement; (c) one item loaded on both the adaptive factor and also formed a fifth factor by itself, (d) the adaptive and functional factors were found to be moderately correlated ($r = 0.42$), and (e) low correlations were found between the other pairs, suggesting that the factors represent distinct orientations to health conception (see Appendix 8).

Test-retest reliability of the earlier version of the LHCS, estimated by administering the instrument to 14 senior baccalaureate nursing students, was 0.78 after one week. Internal consistency of items within the four factors was measured using alpha coefficients and was estimated to be 0.87 for adaptive and eudaimonistic items and 0.88 for clinical and role performance items (see Appendix 8).

The HBCS (see Appendix 7) measured health behavior choice. This instrument consists of 15 behavior statements, three for each of the five practices identified by Harris and Guten (1979): sleep/rest, relaxation, physical exercise, nutrition, and dental care. Each statement is followed by a two-alternative, forced-choice response. Participants were asked to choose the response which best describes the reason why they would engage in that behavior. Responses were scored 1 for each preventive, 3 for each maintenance, and 7 for each promotive response.

Validity of the HBCS was assessed by submitting the items to seven nurses who have engaged in the advanced study of health. The nurses were asked to categorize the responses as preventive, maintenance, or promotive. Interrater agreement on the various items ranged from 70 to 100 per cent. Test-retest reliability, estimated by submitting the scale to 14 senior baccalaureate nursing students, was 0.94 after one week (Laffrey, 1983, 1985).

Procedure for Data Collection

The following procedure was used in data collection:

1. Sixty questionnaire packets were prepared for distribution at the senior citizen's center. The packets included the following materials: informed consent, demographic data and self-assessed health status, LHCS, and HBCS (see Appendixes 4 through 7).

2. Announcements were made by the Executive Director prior to the center's activities, explaining the study and soliciting volunteers.

3. Questionnaire packets were distributed to 53 subjects by the Executive Director.

4. Packets were returned to the Executive Director of the center as they were completed and collected by the research investigator at the end of six weeks.

Hypotheses

The following hypotheses were tested in this study:

1. Health conception is positively correlated with health behavior choice. The association between health conception and a tendency toward health promotion increases as the level of health conception increases.

2. Health conception is positively correlated with health status. The association between health conception and health status increases

as the level of health conception increases.

3. Health status is positively correlated with health behavior choice. High health status is associated with a tendency toward health promotion.

Analysis of Data

Data obtained from the three instruments was recorded and scored as follows:

1. Demographic data (see Appendix 5), consisting of age, sex, race, education, occupation, income, and marital status, was collated according to each category.

2. Health status was recorded as a single score ranging from 1 (worst possible health) to 10 (best possible health).

3. The LHCS (see Appendix 6) was scored by sorting the statements about health into four subscales: eudaimonistic, adaptive, functional/role performance, and clinical. The score for each subscale was determined by adding the ratings given to each statement and dividing by the total number of statements.

4. The HBCS (see Appendix 7) was scored by adding the pre-assigned ratings for each response and dividing by the number of responded items. The pre-assigned ratings were as follows: 1 for each preventive, 3 for each maintenance, and 7 for each promotive response.

5. Hypotheses were tested by means of correlation coefficients, using the International Business Machines Personal Computer software package Statistics: IBM PC Version 5.1 (Basic Business Software, 1982), linear regression subprogram.

RESULTS

The results of data analysis are presented in five sections: (a) characteristics of the sample, (b) health status, (c) health conception, (d) health behavior choice, and (e) testing of hypotheses. The section on health conception discusses each of the four subscales of the Laffrey Health Conception Scale (LHCS) separately. Separate data analysis was performed on each of the subscales because of factor analysis which suggested that the subscales measure four distinct orientations to health. The 95 per cent level of probability was accepted as statistically significant.

Thirty-two questionnaires were completed and returned to the senior citizen's center. The questionnaires were inspected and two were discarded as not meeting the criteria for sample selection. One person did not mark age, and one person was below 55 years of age. Missing data was treated by eliminating the incomplete pairs of variables from data analysis, rather than by eliminating the entire case.

Characteristics of the Sample

Demographic characteristics which were investigated for the sample include age, sex, race, education, occupation, income, and marital status (see Appendix 5). Participants were Caucasian (100 %) and predominantly retired (93 %). One participant reported being unemployed and one was currently working. Seventy per cent of the participants were female and 30 per cent male. Fifty per cent were married, 37 per cent widowed, and 13 per cent divorced. Means, ranges,

and standard deviations of age, education, and income are presented in Table 1.

Table 1

Selected Demographic Characteristics

	Mean	Range	SD[a]
Age	69	57-84	6.46
Highest grade completed	12	6-16	2.53
Monthly income in dollars	1097	350-3500	736

[a] SD = standard deviation.

Health Status

Twenty-eight out of 30 participants marked the modified Cantril Ladder indicating self-assessed health status (see Appendix 5). Scores ranged from 5 to 10, with a mean score of 7.89 and a standard deviation of 1.52. These findings are consistent with previous research which suggests that older adults rate their health in the upper or positive end of the ladder (Palmore & Luikart, 1972; Stoller, 1984).

Health Conception

Eight hundred and three out of 840 responses on the LHCS (see Appendix 6) were appropriately marked. The number of unmarked items was as follows: nine eudaimonistic, seven adaptive, thirteen functional/role performance, and eight clinical. One questionnaire accounted for 20 of the 37 unmarked responses. Means, ranges, and standard deviations for the four subscales of the LHCS are presented in Table 2.

Table 2

Laffrey Health Conception Scale

Subscales	Mean	Range	SD[a]
Eudaimonistic health conception	4.80	1-6	1.19
Adaptive health conception	5.06	2-6	1.19
Functional health conception	4.74	1-6	1.25
Clinical health conception	4.37	1-6	1.37

[a]SD = standard deviation.

Health Behavior Choice

Four hundred and twenty-one out of 450 responses on the Health Behavior Choice Scale (HBCS; see Appendix 7) were appropriately marked. One participant did not mark any of the HBCS items. Individual HBCS scores ranged from 3 to 5.3, with a mean score of 4.2 and a standard deviation of 0.62. These results are similar to those reported for adults 18 to 69 years of age (Laffrey, 1983, 1985).

Testing of Hypotheses

Three hypotheses were developed for this study. It was hypothesized that positive relationships exist between: (a) health conception and health behavior choice, (b) health status and health conception, and (c) health status and health behavior choice. The correlation coefficients which were obtained using Statistics: IBM PC Version 5.1 (Basic Business Software, 1982) were confirmed by means of hand computations of Pearson's r. The scores on each of the subscales of the LHCS (eudaimonistic, adaptive, functional/role performance, and

clinical) were correlated to the scores on the HBCS and to the self-assessed health status. Interval-level tests were used, based on arguments by Cohen and Cohen (1975), Kerlinger (1973), and Labovitz (1970) that correlation coefficients are appropriate for use with ordinal data. On completion of the study, a summary of the results was sent to the participants and to the author of the LHCS and HBCS. The results of data analysis of the hypotheses are summarized in Table 3.

Hypothesis 1. Health conception is positively correlated with health behavior choice.

This hypothesis was tested by separate correlation coefficients comparing the total score on the HBCS to each of the subscores on the LHCS. Results were as follows: (a) eudaimonistic health conception and HBCS, $r = 0.24$; (b) adaptive health conception and HBCS, $r = 0.29$; (c) functional health conception and HBCS, $r = 0.23$; (d) clinical health conception and HBCS, $r = 0.11$, and (e) total LHCS and HBCS, $r = 0.28$. Hypothesis 1 was therefore not supported.

Hypothesis 2. Health status is positively correlated with health conception.

This hypothesis was tested by separate correlation coefficients comparing self-assessed health status to each of the subscores on the LHCS. Results were as follows: (a) eudaimonistic health conception and health status, $r = 0.07$; (b) adaptive health conception and health status, $r = 0.17$; (c) functional health conception and health status, $r = 0.27$; (d) clinical health conception and health status, $r = 0.46$; and (e) total LHCS and health status, $r = 0.21$. An increased positive correlation from the highest level of health conception to the lowest was noted. The relationship between clinical health conception and health status was significant. It was expected that eudaimonistic and

adaptive definitions of health would be associated with high levels of health, while functional and clinical definitions would be associated with low levels of health. Hypothesis 2 was therefore not supported.

Hypothesis 3. Health status is positively correlated with health behavior choice.

This hypothesis was tested by correlation of the self-assessed health status and the HBCS. The coefficient obtained was 0.019. Hypothesis 3 was therefore not supported.

Table 3

Correlation Matrix for Subscales of the Laffrey Health Conception Scale, Health Behavior Choice Scale, and Health Status

	HBCS r	Health status r
Health status	0.019	1.000
Eudaimonistic health conception	0.236	0.073
Adaptive health conception	0.285	0.166
Functional health conception	0.230	0.265
Clinical health conception	0.113	0.463*

r = correlation coefficient.

*p < 0.02.

DISCUSSION

Discussion of the findings is treated in two sections: (a) limitations of the study and (b) results of hypothesis testing. The reasons for various findings are explored and the results of this study are compared with previous research findings.

Limitations of the Study

The study was limited by the following factors:

1. Small sample size (n = 30). With a sample of 30, there is only a 64 per cent chance of detecting a medium effect size, defined as a magnitude of 30 per cent of the total variation, at a 95 per cent level of probability (Cohen, 1977).

2. Non-random sampling. A convenient sample of well elderly individuals was obtained by soliciting volunteers at a senior citizen's center in central Florida. While this setting insured an easily sampled population, it imposes restrictions on the generalizability of the results to the elderly as a whole. Generalizability is further restricted in that individuals who volunteer for surveying may not be representative of the population from which they are drawn.

3. Instruments. Prior research concerning the relationships between health conception and health behavior choice (Laffrey, 1983, 1985) used an earlier version of the Laffrey Health Conception Scale (LHCS), making it impossible to legitimately compare the findings of this study with Laffrey's results. The item concerning monthly income also needs to be clarified. Some participants indicated that their

responses included only personal income, while other participants included their spouse's income as well.

Results of Hypothesis Testing

This study attempted to determine whether there is a relationship between health behavior choice and health conception and to investigate whether the older person's health status affects the way in which health is defined and the choices made regarding health. Three hypotheses were developed and tested.

Hypothesis 1. Health conception is positively correlated with health behavior choice.

Weakly positive relationships which did not achieve statistical significance were detected between health behavior choice and the four orientations to health identified by Smith (1981). However, eudaimonistic, adaptive, and functional/role performance orientations demonstrated a larger degree of positive correlation with health behavior choice than did clinical orientation (see Table 3). It is possible that with a larger sample size, a significant relationship may have been noted. With a sample of 95, there was a 95 per cent chance that Laffrey's research would detect a medium effect size, defined as a magnitude of 30 per cent of the total variation, at a probability level of 0.95. With a sample of 30, there was only a 64 per cent chance that this study would detect the same size effect at the same level of probability (Cohen, 1977).

Hypothesis 2. Health status is positively correlated with health conception.

It was expected that the correlation between health status and health conception would decrease as the level of health conception decreased. Instead, correlation coefficients increased steadily, with

a significant relationship between clinical health conception and health status (see Table 3). Items which were used to measure clinical health conception included four items relating to utilization of health care: not seeing a doctor (2 items), and not taking medications (2 items). It is possible that those persons who responded negatively to these items also tend not to utilize health care and to suffer from decreased health status as a result.

Hypothesis 3. Health status is positively correlated with health behavior choice.

A weakly positive relationship which did not achieve statistical significance ($r = 0.019$) was detected between health status and health behavior choice. It is possible that with a larger sample size, a significant positive relationship may have been noted. Practices which have been identified as being highly conducive to good health (Belloc & Breslow, 1972) are: obtaining adequate sleep, eating regular meals, mantaining near average weight, engaging in physical activity, and avoiding smoking and excessive drinking. All of these practices with the exception of avoiding smoking and excessive drinking were included in the development of the HBCS. However, no attempt was made to determine the extent to which a behavior was actually performed, only the reason for which it would be performed.

SUMMARY AND CONCLUSIONS

The purpose of the study was to investigate the relationships among health status, personal definition of health, and health behavior choice in the elderly. Maslow's theory of motivation (1966) and Rogers' concept of unitary man (1970) provided the overall theoretical framework. Valuing and choosing were identified as two characteristics of unitary man (Roy, 1980), while decreased health status was postulated to result in lower levels of both valuing and choosing.

Positive relationships were hypothesized between the three variables. Self-assessed health status was measured using a modified Cantril Ladder (see Appendix 5), personal definition of health was measured using the Laffrey Health Conception Scale (LHCS; see Appendix 6), and health behavior choice was measured using the Health Behavior Choice Scale (HBCS; see Appendix 7). The only statistically significant relationship to emerge from data analysis was a positive correlation between clinical health conception and health status.

Implications for Nursing

The goal of nursing is assisting individuals in achieving a state of health. The findings of this study complement prior research which indicates that health behavior choices are influenced by the individual's personal definition of health. As members of the health care system, nurses need to determine what health means to the elderly individual. Behaviors which are conducive to good health may then be presented in relation to their ability to assist the individual achieve

his or her own personal ideal of health.

The findings of this study further suggest that health status is positively influenced by a tendency toward health promotion as opposed to illness prevention. Nurses therefore need to encourage promotive behaviors in elderly clients who, because of the increased incidence of chronic disease with aging, may tend to respond more to preventive measures.

Health status is further influenced by health conception, with a decrease in clinical health conception being associated with lower levels of health. This finding suggests that elderly individuals who do not associate good health with appropriate health care may tend not to utilize health care services and to suffer decreased health as a result. It is essential that nurses recognize and promote the multidimensional nature of the concept of health in order to assist clients toward optimal health. The reasons why an individual does not associate good health with appropriate health care should be explored by the nurse and attempts made to relate the individual's personal ideal of health to behaviors associated with health care utilization.

Recommendations for Future Research

This study has suggested a variety of ways in which future research may be directed. Specific recommendations are:

1. Repeat the study using a larger sample which is more representative of the elderly population as a whole.

2. Study participants over a period of time to determine whether or not changes in self-assessed health status are associated with changes in the other variables.

3. Administer the instruments to a group of ill individuals as well as healthy individuals to determine if differences exist between the

two groups.

4. Incorporate actual behaviors, including health care utilization, into the research design.

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APPENDIXES

APPENDIX 1

PERMISSION TO USE THE LAFFREY HEALTH CONCEPTION SCALE

AND HEALTH BEHAVIOR CHOICE SCALE

School of Nursing
Department of Mental Health and
Community Nursing
Room N505-Y
San Francisco, California 94143
(415) 666-1504

University of California, San Francisco A Health Sciences Campus

March 10, 1986

Norma Wood
6979 Aberseldy Avenue North
St. Petersburg, FL 33709

Dear Ms. Wood:

Thank you for your interest in the Laffrey Health Conception Scale. Enclosed is a copy of the most recent form of the LHCS with scoring information. Initial support for content and construct validity and internal consistency are described in the enclosed "Overview of the LHCS." Work on validity and reliability establishment is continuing. To assist in this process, I would appreciate receiving the following from you should you use the instrument:

1. Ranges, means and standard deviations of the subscores and total LHCS scores for your population
2. Demographic information for your population (i.e. age, sex, race, ethnicity and description of population such as orthopedic, cardiovascular inpatients, etc.)
3. Any reliability estimates that you do as part of your study
4. A summary of your results

These data will assist in the further development of the validity and reliability of the LHCS and also contribute to the development of a normative data base. Data which you provide me will be used for this purpose only.

I hope you find the LHCS useful in your research. Please contact me with any questions or comments you have about the scale and its use in your research.

Sincerely,

Shirley Laffrey

Shirley Cloutier Laffrey, Ph.D., R.N.
Assistant Professor

SCL/ey
Enc.

APPENDIX 1 (cont'd.)

School of Nursing
Department of Mental Health and Community Nursing
Room N506-Y
San Francisco, California 94143
(415) 666-1504

UCSF

University of California, San Francisco . . . A Health Sciences Campus

March 25, 1986

Norma Wood
6979 Aberfeldy Ave. N.
St. Petersburg, FL 33709

Dear Ms. Wood:

I'm sorry I did not respond to your question about the Health Behavior Choice Scale (HBCS) when I sent you the other instrument. Unfortunately, I am not able to share the HBCS with you at this time. It was completely revised and is currently being submitted to a group of adults for validity and reliability testing. When these data are available, I will be happy to send you the instrument. If you tell me the date by which you need a health behavior instrument, I'll be happy to let you know as soon as this one is available. At a minimum, the current testing will take 6-8 weeks.

Dr. Ann Muhlenkamp, Arizona State University, also has a health behavior instrument. Several articles in the recent nursing literature discuss its use. As far as I know, adequate reliability and validity have been established for this instrument. Also, Dr. Nola Pender, Northern Illinois University, has developed a health promotion behavior instrument. This was presented at the 1985 ANA Council of Nurse Researchers. I do not know if it is available yet for use, but Dr. Pender can be contacted at the university. These two scales (Muhlenkamp and Pender) measure the frequency of engaging in health behaviors but not the reasons for choosing the behaviors.

Please don't hesitate to contact me if you wish me to send you the HBCS when this wave of testing is completed.

Sincerely,

Shirley Laffrey

Shirley Cloutier Laffrey, RN, MPH, PhD
Assistant Professor, Community Health Nursing

APPENDIX 1 (cont'd.)

6979 Aberfeldy Avenue North

St. Petersburg, Florida

November 3, 1986

Dear Dr. Laffrey:

School of Nursing

Department of Mental Health and Community Nursing

Room N505-Y

San Francisco, California 94143

Thank you for sending me a copy of the revised Health Behavior Choice Scale (HBCS). Unfortunately, due to time constraints and the lack of reliability and validity for the new scale, my committee has requested that I proceed with my thesis using the Laffrey Health Conception Scale (LHCS) and the original version of the HBCS. If I do not hear from you within two weeks, I will assume that this meets with your approval. Again, let me thank you for your assistance and for sharing these instruments with me.

Sincerely,

Norma J. Wood

Norma J. Wood

APPENDIX 2

INSTITUTIONAL REVIEW BOARD APPROVAL

UNIVERSITY OF SOUTH FLORIDA
TAMPA • ST. PETERSBURG • FORT MYERS • SARASOTA

MEDICAL CENTER
DIVISION OF SPONSORED RESEARCH
MEDICAL CENTER BRANCH
BOX 35
12901 N. 30TH STREET
TAMPA, FLORIDA 33612

813 974-2218

November 18, 1986

MEMORANDUM

TO: Norma J. Wood
Graduate Student
College of Nursing
MDN Box 22

FROM: Allan L. Goldman, M.D.
Professor of Medicine
Chairman, USF Medical Center -
Institutional Review Board

SUBJECT: Protocol: "Health Status, Personal Definition of Health, and Health Behavior Choice in the Elderly" - Graduate Thesis

I have reviewed your protocol entitled above. Since this research only involves survey and interview research where subjects cannot be identified, directly or through identifiers linked to the subjects, it falls into an exemption category that does not require review by the Institutional Review Board.

Should there be any questions on this or related matters, please do not hesitate to contact me.

ALG:MC:md
930:66:2

(Exemption is claimed based on
Category No. 3 of 45 CFR 46.101)

cc: Alice Dowd, Ed.D.

APPENDIX 3

PERMISSION TO COLLECT DATA

9704 North Blvd. • Tampa, Florida 33612 • (813) 932-0241

December 16, 1986

Ms. Norma Wood
6979 Aberseldy Ave. N.
St. Petersburg, Florida 33709

Dear Norma:

The Life Enrichment Center will be pleased to assist you with research for your thesis.

We should be able to distribute and collect questionaires from about sixty seniors.

Sincerely,

Alene H. Love

Alene H. Love
Executive Director

APPENDIX 4

INFORMED CONSENT

UNIVERSITY OF SOUTH FLORIDA COLLEGE OF NURSING

TITLE OF STUDY: HEALTH STATUS, PERSONAL DEFINITION OF HEALTH, AND HEALTH BEHAVIOR CHOICE IN THE ELDERLY

THE PURPOSE OF THIS RESEARCH IS TO DETERMINE THE RELATIONSHIPS AMONG HEALTH STATUS, PERSONAL DEFINITION OF HEALTH, AND HEALTH BEHAVIOR CHOICES. THE RESEARCH QUESTIONNAIRE CONTAINS STATEMENTS ABOUT HEALTH AND REQUIRES FIFTEEN TO TWENTY MINUTES TO COMPLETE. ALL INFORMATION IS CONFIDENTIAL, AND THE PARTICIPANTS WILL NOT BE IDENTIFIED IN ANY REPORT BASED ON THIS STUDY.

PARTICIPANTS MAY EXPECT NO BENEFITS OR RISKS TO THEMSELVES FOR PARTICIPATING. ANY QUESTIONS OR CONCERNS ABOUT THE STUDY MAY BE DIRECTED TO THE RESEARCH INVESTIGATOR, NORMA WOOD, AT 541-2209 IN ST. PETERSBURG.

I HAVE READ THE ABOVE INFORMATION ABOUT THIS STUDY AND HAVE BEEN ABLE TO EXPRESS QUESTIONS AND CONCERNS, WHICH HAVE BEEN SATISFACTORILY RESPONDED TO BY THE RESEARCH INVESTIGATOR. I BELIEVE I UNDERSTAND THE PURPOSE OF THE STUDY AS WELL AS THE POTENTIAL RISKS THAT ARE INVOLVED. I UNDERSTAND THAT I WILL BE GIVEN A COPY OF MY SIGNED CONSENT TO PARTICIPATE IN THIS STUDY. I HEREBY GIVE MY INFORMED AND FREE CONSENT TO BE A PARTICIPANT IN THIS STUDY.

_____ _____

SIGNATURE OF SUBJECT DATE

APPENDIX 5

DEMOGRAPHIC DATA AND HEALTH STATUS

AGE_____ HIGHEST GRADE COMPLETED_____

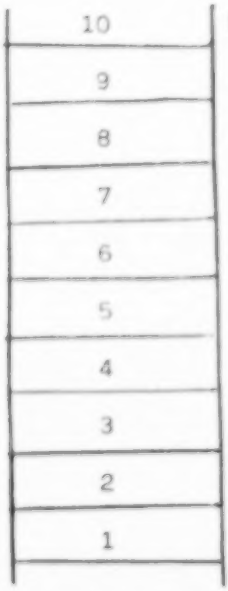
SEX_____ PRESENT OCCUPATION_____

RACE____ MONTHLY INCOME_____

MARITAL STATUS (CIRCLE ONE):

MARRIED, WIDOWED, DIVORCED, NEVER MARRIED, SEPARATED

BELOW IS A PICTURE OF A LADDER. THE TOP OF THE LADDER REPRESENTS THE BEST POSSIBLE HEALTH AND THE BOTTOM OF THE LADDER THE WORST POSSIBLE HEALTH. WHERE WOULD YOU PLACE YOUR OWN PRESENT STATE OF HEALTH ON THE LADDER?



BEST POSSIBLE HEALTH

WORST POSSIBLE HEALTH

APPENDIX 6

LAFFREY HEALTH CONCEPTION SCALE

BELOW ARE 28 STATEMENTS TO DESCRIBE THE MEANING THAT "HEALTH" OR "BEING HEALTHY" HAS FOR DIFFERENT PEOPLE. DEPENDING ON YOUR PERSONAL DEFINITION OF HEALTH, YOU MAY EITHER AGREE OR DISAGREE WITH THE STATEMENTS. BESIDE EACH STATEMENT IS A SCALE WHICH RANGES FROM STRONGLY DISAGREE (1) TO STRONGLY AGREE (6). FOR EACH ITEM, WE WOULD LIKE YOU TO CIRCLE THE NUMBER WHICH BEST REPRESENTS THE EXTENT TO WHICH YOU DISAGREE OR AGREE WITH THE STATEMENT. THE MORE STRONGLY YOU DISAGREE WITH A STATEMENT, THE LOWER WILL BE THE NUMBER THAT YOU CIRCLE. THE MORE STRONGLY YOU AGREE WITH A STATEMENT, THEN THE HIGHER WILL BE THE NUMBER YOU CIRCLE. PLEASE MAKE SURE THAT YOU ANSWER EVERY ITEM AND THAT YOU CIRCLE ONLY ONE NUMBER PER ITEM. THIS IS A MEASURE OF HOW YOU DEFINE HEALTH; THERE ARE NO RIGHT OR WRONG ANSWERS.

"HEALTH" OR "BEING HEALTHY" MEANS:	STRONGLY DISAGREE	MODERATELY DISAGREE	SLIGHTLY DISAGREE	SLIGHTLY AGREE	MODERATELY AGREE	STRONGLY AGREE
1. FEELING GREAT - ON TOP OF THE WORLD	1	2	3	4	5	6
2. BEING ABLE TO ADJUST TO CHANGES IN MY SURROUNDINGS	1	2	3	4	5	6
3. FULFILLING MY DAILY RESPONSIBILITIES	1	2	3	4	5	6
4. BEING FREE FROM SYMPTOMS OF DISEASE	1	2	3	4	5	6
5. BEING ABLE TO DO THOSE THINGS I HAVE TO DO	1	2	3	4	5	6
6. NOT REQUIRING A DOCTOR'S SERVICES	1	2	3	4	5	6
7. CREATIVELY LIVING LIFE TO THE FULLEST	1	2	3	4	5	6
8. ADJUSTING TO LIFE'S CHANGES	1	2	3	4	5	6

APPENDIX 6 (cont'd.)

	1 STRONGLY DISAGREE	2 MODERATELY DISAGREE	3 SLIGHTLY DISAGREE	4 SLIGHTLY AGREE	5 MODERATELY AGREE	6 STRONGLY AGREE
9. NOT REQUIRING PILLS FOR ILLNESS OR DISEASE	1	2	3	4	5	6
10. BEING ABLE TO FUNCTION AS EXPECTED	1	2	3	4	5	6
11. NOT BEING UNDER A DOCTOR'S CARE FOR ILLNESS	1	2	3	4	5	6
12. FACING EACH DAY WITH ZEST AND ENTHUSIASM	1	2	3	4	5	6
13. BEING ABLE TO COPE WITH STRESSFUL EVENTS	1	2	3	4	5	6
14. BEING ABLE TO CHANGE AND ADJUST TO DEMANDS MADE BY THE ENVIRONMENT	1	2	3	4	5	6
15. NOT BEING SICK	1	2	3	4	5	6
16. ACTUALIZING MY HIGHEST AND BEST ASPIRATIONS	1	2	3	4	5	6
17. ADEQUATELY CARRYING OUT MY DAILY RESPONSIBILITIES	1	2	3	4	5	6
18. LIVING AT TOP LEVEL	1	2	3	4	5	6
19. ADAPTING TO THINGS AS THEY REALLY ARE, NOT AS I'D LIKE THEM TO BE	1	2	3	4	5	6
20. I DO NOT REQUIRE MEDICATIONS	1	2	3	4	5	6
21. CARRYING ON THE NORMAL FUNCTIONS OF DAILY LIVING	1	2	3	4	5	6
22. COPING WITH CHANGES IN MY SURROUNDINGS	1	2	3	4	5	6
23. REALIZING MY FULL POTENTIAL	1	2	3	4	5	6
24. FULFILLING MY RESPONSIBILITIES AS A HUSBAND/WIFE/ SON/DAUGHTER/FRIEND/WORKER,ETC.	1	2	3	4	5	6
25. HAVING NO PHYSICAL OR MENTAL INCAPACITIES	1	2	3	4	5	6
26. PERFORMING AT THE EXPECTED LEVEL	1	2	3	4	5	6
27. NOT COLLAPSING UNDER ORDINARY STRESS	1	2	3	4	5	6
28. MY MIND AND BODY FUNCTION AT THEIR HIGHEST LEVEL	1	2	3	4	5	6

APPENDIX 7

HEALTH BEHAVIOR CHOICE SCALE

THIS SCALE LOOKS AT THE REASONS FOR WHICH PEOPLE DO CERTAIN BEHAVIORS. PLEASE CIRCLE THE REASON (EITHER A OR B) WHICH COMES CLOSEST TO WHY YOU DO OR WOULD DO THE BEHAVIORS. IF YOU DO NOT DO A BEHAVIOR LISTED, TRY TO PROJECT THE REASON FOR WHICH YOU WOULD DO THE BEHAVIOR IF YOU <u>WERE</u> TO DO IT.

1. I TRY TO BE ACTIVE BECAUSE THIS HELPS ME:
   A) STAY WELL
   B) REDUCE MY CHANCE OF ILLNESS
2. I TRY TO BRUSH MY TEETH BECAUSE THIS:
   A) PREVENTS CAVITIES AND GUM DISEASE
   B) HELPS ME TO HAVE THE HEALTHIEST MOUTH POSSIBLE
3. I TRY TO EAT SENSIBLY BECAUSE THIS HELPS ME TO:
   A) MAINTAIN MY PRESENT LEVEL OF WELL-BEING
   B) INCREASE MY LEVEL OF WELL-BEING
4. I TRY TO GET ENOUGH SLEEP TO:
   A) ACHIEVE A HIGHER LEVEL OF WELL-BEING
   B) RESIST ILLNESS
5. MOUTH CARE HELPS ME:
   A) HAVE THE HEALTHIEST MOUTH POSSIBLE
   B) MAINTAIN MY PRESENT HEALTHY MOUTH
6. TAKING CARE OF MY TEETH HELPS ME TO:
   A) PREVENT MOUTH PROBLEMS
   B) KEEP MY MOUTH NORMAL

APPENDIX 7 (cont'd.)

7. I RELAX BECAUSE IT HELPS:

   A) REDUCE MY CHANCE OF ILLNESS

   B) MY MIND AND BODY FUNCTION AT THEIR BEST

8. MY PHYSICAL ACTIVITY:

   A) KEEPS ME NORMAL

   B) HELPS ME FUNCTION AT MY BEST

9. I PAY ATTENTION TO WHAT I EAT BECAUSE THIS HELPS ME:

   A) AVOID ILLNESS

   B) STAY WELL

10. WHEN I EXERCISE IT IS PRIMARILY TO:

   A) INCREASE MY ENERGY LEVEL

   B) PREVENT STRESS BUILD-UP

11. EATING A SENSIBLE DIET HELPS ME TO:

   A) NOT GET SICK

   B) PERFORM AT MY BEST

12. RELAXING HELPS ME TO:

   A) FEEL BETTER

   B) STAY WELL

13. WHEN I RELAX IT IS PRIMARILY TO:

   A) KEEP UP MY PRESENT ENERGY LEVEL

   B) PREVENT STRESS BUILD-UP

14. GETTING MY PROPER REST HELPS ME TO:

   A) STAY WELL

   B) LIVE AT MY FULL POTENTIAL

15. I TRY TO GET ENOUGH REST TO:

   A) MAINTAIN MY PRESENT ENERGY

   B) PREVENT LOSS OF ENERGY

APPENDIX 8

OVERVIEW OF THE LAFFREY HEALTH CONCEPTION SCALE

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Health is generally accepted as a major concept in nursing, yet is not consistently defined either within nursing or in other health disciplines. Consequently, when we speak of health promotion as the goal of nursing, it is difficult to understand exactly what it is we are promoting. Clarity would be enhanced with the development of valid and reliable measures of the health concept.

The Laffrey Health Conception Scale (LHCS)* was developed to measure the perception or meaning of health held by different individuals. The LHCS is based on Smith's (1979; 1981) description of four ideas of health, and includes the following dimensions:

1. Clinical: The absence of disease, illness, or symptoms. Health is medically defined and illness or symptom-focused. One is considered healthy if he/she is not ill.

2. Role Performance/Functional: Fulfillment of socially defined roles. Ability to perform/function as expected according to the roles held by the individual.

3. Adaptive: Flexible adjustment to changing circumstances. Ability to efficiently adapt to the environment and its stressors. Ability to maintain stability in one's life.

4. Eudaimonistic: Exuberant well-being. Transcendence of one's ordinary life situation to higher levels of well-being and humanness. Ability to achieve highest potentials and self-realization.

The LHCS is comprised of 28 items in a Likert format ranging from "1" (strongly disagree) to "6" (strongly agree). Statements used in the scale were drawn from the responses of 75 well adults aged 24 to 65 to the question "What do you mean when you say you are very healthy?"

An individual's score on the LHCS is obtained for each dimension of health conception and then for the total scale. The score for each dimension is obtained by summing the scores of the items:

Clinical Health Score = Items 4 + 6 + 9 + 11 + 15 + 20 + 25
Role Performance/Functional Health Score = Items 3 + 5 + 10 + 17 + 21 + 24 + 26
Adaptive Health Score = Items 2 + 8 + 12 + 14 + 19 + 22 + 27
Eudaimonistic Health Score = Items 1 + 7 + 13 + 16 + 18 + 23 + 28

A total score can be obtained by summing all of the items.

*The earlier form of the LHCS (Laffrey, 1982) was called the Health Conception Measure (HCM).

APPENDIX B (cont'd.)

Validity

Content validity was examined by submitting the 28 items to a panel of seven nurse-experts who independently placed each item into one of the four categories or dimensions according to the above definitions. Twenty-five items achieved 100% interrater agreement; two items achieved 75% and the remaining item achieved 65% interrater agreement. These last three items were retained because they had achieved 100% interrater agreement by a previous panel (Laffrey, 1982) of seven nurse-experts during the first phase of instrument development.

Construct validity was assessed by doing a factor analysis using the principal components method with orthogonal varimax rotation. The sample consisted of 141 first and second year M.S. students enrolled in a nursing issues class. The factor analysis yielded four factors which were identical to the factors conceptualized for the development of the instrument. Only one item (#2--able to adjust to changes) loaded on more than one factor. This item loaded on the adaptive factor (.50) and also formed a fifth factor by itself (.60). It was retained in the adaptive factor with the other six adaptive items. The factor analysis thus confirmed the conceptualization for the instrument.

Another factor analysis was then computed using the principal components method and an oblique rotation. This yielded the same factors as the first factor analysis. Two factors (adaptive and functional) were moderately correlated (r = .42). Correlations of the other pairs of factors were low. Therefore, at this time, it appears that the LHCS is measuring relatively distinct dimensions of health conception.

The earlier form of the LHCS (then called the HCM) containing 16 items and using a card sort technique for administration, was administered to 94 well adults, aged 18 to 69 (Laffrey, 1982; 1983). In this study, health conception scores were more eudaimonistic for individuals who selected health behaviors for health promotion reasons. Likewise, health conception scores were more clinical for individuals who selected health behaviors for illness prevention reasons (r = .44; p = .001). Also, with this sample, health conception was not significantly correlated with self-actualization as measured by the Personal Orientation Inventory, nor did it differ between normal weight and overweight adults (Laffrey, 1982; 1983).

Reliability

Internal consistency of items within the four factors was measured (N = 141) with alpha coefficients of: Clinical--.68; Role performance/functional--.88; adaptive--.87; and eudaimonistic--.87.

Using the earlier form of the LHCS, a test-retest reliability coefficient was computed (Laffrey, 1982). The sample consisted of 14 senior baccalaureate nursing students enrolled in a research class. The reliability correlation coefficient after one week was .78.

Summary:

The initial development, validity, and reliability of the LHCS is promising. However, because it is in early stages of development, the scale must be used with caution. The populations with which it has been used have consisted of adults living in the community and nursing students. Currently the instrument is being administered to a group of persons with diagnosed chronic disease. It is not known whether ill persons would hold different conceptions of health than well persons.

As the LHCS is used with different population groups, a normative data base will be developed. Therefore, feedback from investigators relative to their populations will be appreciated.